



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2022-0461; Project Identifier MCAI-2021-01156-T; Amendment 39-22113; AD 2022-14-08]

RIN 2120-AA64

Airworthiness Directives; BAE Systems (Operations) Limited Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: The FAA is superseding Airworthiness Directive (AD) 2008-16-06, which applied to all BAE Systems (Operations) Limited Model 4101 airplanes. AD 2008-16-06 required the installation of additional bonding leads, inspection of existing bonding leads for defects, inspection of fuel system pipe runs in the wings to ensure appropriate clearances are maintained, and corrective actions. This AD continues to require the actions in AD 2008-16-06, and adds a requirement to install additional bonding leads around the crossfeed valve and accomplish a resistance check. This AD was prompted by a report that there is insufficient bonding of the crossfeed valve in the fuel tank area. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain other publication listed in this AD as of September 9, 2008 (73 FR 45346, August 5, 2008).

ADDRESSES: For service information identified in this final rule, contact BAE Systems (Operations) Limited, Customer Information Department, Prestwick International Airport, Ayrshire, KA9 2RW, Scotland, United Kingdom; telephone +44 1292 675207; fax +44 1292 675704; email RAPublications@baesystems.com; Internet <https://www.baesystems.com/Businesses/RegionalAircraft/index.htm>. You may view this referenced service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2022-0461.

Examining the AD Docket

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2022-0461; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the mandatory continuing airworthiness information (MCAI) any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Todd Thompson, Aerospace Engineer, Large Aircraft Section, International Validation Branch, FAA, 2200 South 216th St., Des Moines, WA 98198; telephone and fax 206-231-3228; email todd.thompson@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The Civil Aviation Authority (CAA), which is the aviation authority for the United Kingdom, has issued CAA AD G-2021-0013, dated October 21, 2021 (also referred to as the MCAI), to correct an unsafe condition for all BAE Systems (Operations) Limited Model 4101 airplanes. You may examine the MCAI in the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2022-0461.

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2008-16-06, Amendment 39-15624 (73 FR 45346, August 5, 2008) (AD 2008-16-06). AD 2008-16-06 applied to all BAE Systems (Operations) Limited Model 4101 airplanes. The NPRM published in the *Federal Register* on April 20, 2022 (87 FR 23474). The NPRM was prompted by a report that there is insufficient bonding of the crossfeed valve in the fuel tank area. The NPRM proposed to continue to require the actions in AD 2008-16-06, and add a requirement to install additional bonding leads around the crossfeed valve and accomplish a resistance check. The FAA is issuing this AD to address insufficient or defective bonding in the fuel tank area, which, if not corrected, could lead to ignition of fuel vapors and subsequent fuel tank explosion. See the MCAI for additional background information.

Discussion of Final Airworthiness Directive

Comments

The FAA received no comments on the NPRM or on the determination of the cost to the public.

Conclusion

The FAA reviewed the relevant data and determined that air safety requires adopting this AD as proposed. Except for minor editorial changes, this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any

operator. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products.

Related Service Information under 1 CFR Part 51

BAE Systems (Operations) Limited has issued Service Bulletin J41-28-013, Revision 2, dated July 8, 2019. This service information describes procedures for installation of additional bonding leads on components within the dry bay at Rib 1 on the airplane centerline and below the fuselage (around the crossfeed valve), a resistance check, an inspection of existing bonding leads for defects, an inspection for clearance of all fuel system pipe runs in the wings, and corrective actions, as necessary. Corrective actions include replacing any defective bonding leads and adjusting clearances of the fuel system pipe runs.

This AD also requires BAE Systems (Operations) Limited Service Bulletin J41-28-013, Revision 1, dated January 10, 2008, which the Director of the Federal Register approved for incorporation by reference as of September 9, 2008 (73 FR 45346, August 5, 2008).

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Costs of Compliance

The FAA estimates that this AD affects 12 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

Estimated costs for required actions

| Action | Labor cost | Parts cost | Cost per product | Cost on U.S. operators |
|-------------------------------------|---|-------------------|-------------------------|-------------------------------|
| Retained actions from AD 2008-16-06 | 80 work-hours X \$85 per hour = \$6,800 | \$1,700 | \$8,500 | \$102,000 |

| | | | | |
|-------------|--|---------|---------|----------|
| New actions | 2 work-hours X \$85 per hour = \$170 | \$1,700 | \$1,870 | \$22,440 |
|-------------|--|---------|---------|----------|

Estimated costs of on-condition actions

| Labor cost | Parts cost | Cost per product |
|---------------------------------------|-------------------|-------------------------|
| 1 work-hour X \$85 per hour = \$85 | \$0 | \$85 |

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA’s authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency’s authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

The FAA determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and

(3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by:

a. Removing Airworthiness Directive (AD) 2008-16-06, Amendment 39-15624

(73 FR 45346, August 5, 2008); and

b. Adding the following new AD:

2022-14-08 BAE Systems (Operations) Limited: Amendment 39-22113; Docket No. FAA-2022-0461; Project Identifier MCAI-2021-01156-T.

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD replaces AD 2008-16-06, Amendment 39-15624 (73 FR 45346, August 5, 2008) (AD 2008-16-06).

(c) Applicability

This AD applies to BAE Systems (Operations) Limited Model 4101 airplanes, certificated in any category, all serial numbers.

(d) Subject

Air Transport Association (ATA) of America Code 28, Fuel.

(e) Reason

This AD was prompted by a report that there is insufficient bonding of the crossfeed valve in the fuel tank area. The FAA is issuing this AD to address insufficient or defective bonding in the fuel tank area, which, if not corrected, could lead to ignition of fuel vapors and subsequent fuel tank explosion.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Retained Actions, with Revised Service Information

This paragraph restates the requirements of paragraph (f) of AD 2008-16-06, with revised service information. Within 24 months after September 9, 2008 (the effective date of AD 2008-16-06), unless already done, do the actions specified in paragraphs (g)(1) through (3) of this AD.

(1) Inspect the bonding leads between ribs 1 and 9, and between ribs 16 and 19, in the left-hand (LH) and right-hand (RH) wings in accordance with paragraph 2.B.(2) of the Accomplishment Instructions of BAE Systems (Operations) Limited Service Bulletin J41-28-013, Revision 1, dated January 10, 2008; or BAE Systems (Operations) Limited Service Bulletin J41-28-013, Revision 2, dated July 8, 2019; and, before next flight, replace all defective bonding leads with airworthy parts in accordance with BAE Systems (Operations) Limited Service Bulletin J41-28-013, Revision 1, dated January 10, 2008; or BAE Systems (Operations) Limited Service Bulletin J41-28-013, Revision 2, dated July 8, 2019. As of the effective date of this AD, BAE Systems (Operations) Limited Service Bulletin J41-28-013, Revision 2, dated July 8, 2019, must be used for the actions required by this paragraph.

(2) Inspect all fuel system pipe runs inside the LH and RH wings in accordance with paragraph 2.B.(3) of the Accomplishment Instructions of BAE Systems (Operations) Limited Service Bulletin J41-28-013, Revision 1, dated January 10, 2008; or BAE Systems (Operations) Limited Service Bulletin J41-28-013, Revision 2, dated July 8, 2019; and, if incorrect clearances are found, before next flight, adjust clearances in accordance with BAE Systems (Operations) Limited Service Bulletin J41-28-013, Revision 1, dated January 10, 2008; or BAE Systems (Operations) Limited Service Bulletin J41-28-013, Revision 2, dated July 8, 2019. As of the effective date of this AD, BAE Systems (Operations) Limited Service Bulletin J41-28-013, Revision 2, dated July 8, 2019, must be used for the actions required by this paragraph.

(3) Install additional electrical bonding of components within the LH and RH wings in accordance with paragraphs 2.B.(4) through 2.B.(15) of the Accomplishment Instructions of BAE Systems (Operations) Limited Service Bulletin J41-28-013, Revision 1, dated January 10, 2008; or paragraphs 2.B.(4) and 2.B.(6) through 2.B.(16) inclusive of BAE Systems (Operations) Limited Service Bulletin J41-28-013, Revision 2, dated July 8, 2019. As of the effective date of this AD, BAE Systems (Operations) Limited Service Bulletin J41-28-013, Revision 2, dated July 8, 2019, must be used for the actions required by this paragraph.

(h) New Requirement of this AD: Replace Bolts and Washers Securing Crossfeed Valve

Within 24 months after the effective date of this AD, install additional bonding leads on components within the dry bay at Rib 1 on the airplane centerline and below the fuselage (around the crossfeed valve) and perform a resistance check in accordance with paragraph 2.B.(5) of BAE Systems (Operations) Limited Service Bulletin J41-28-013, Revision 2, dated July 8, 2019.

(i) Other FAA AD Provisions

(1) *Alternative Methods of Compliance (AMOCs)*: The Manager, Large Aircraft

Section, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or responsible Flight Standards Office, as appropriate. If sending information directly to the Large Aircraft Section, International Validation Branch, send it to the attention of the person identified in paragraph (j)(2) of this AD. Information may be emailed to: 9-AVS-AIR-730-AMOC@faa.gov. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(2) *Contacting the Manufacturer*: For any requirement in this AD to obtain instructions from a manufacturer, the instructions must be accomplished using a method approved by the Manager, Large Aircraft Section, International Validation Branch, FAA; or the Civil Aviation Authority (CAA); or BAE Systems (Operations) Limited's CAA Design Organization Approval (DOA). If approved by the DOA, the approval must include the DOA-authorized signature.

(j) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) CAA AD G-2021-0013, dated October 21, 2021, for related information. This MCAI may be found in the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2022-0461.

(2) For more information about this AD, contact Todd Thompson, Aerospace Engineer, Large Aircraft Section, International Validation Branch, FAA, 2200 South 216th St., Des Moines, WA 98198; telephone and fax 206-231-3228; email todd.thompson@faa.gov.

(3) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (k)(5) and (6) of this AD.

(k) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(3) The following service information was approved for IBR on [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(i) BAE Systems (Operations) Limited Service Bulletin J41-28-013, Revision 2, dated July 8, 2019.

(ii) [Reserved]

(4) The following service information was approved for IBR on September 9, 2008 (73 FR 45346, August 5, 2008).

(i) BAE Systems (Operations) Limited Service Bulletin J41-28-013, Revision 1, dated January 10, 2008.

(ii) [Reserved]

(5) For service information identified in this AD, contact BAE Systems (Operations) Limited, Customer Information Department, Prestwick International Airport, Ayrshire, KA9 2RW, Scotland, United Kingdom; telephone +44 1292 675207; fax +44 1292 675704; email RAPublications@baesystems.com; Internet <https://www.baesystems.com/Businesses/RegionalAircraft/index.htm>.

(6) You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

(7) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the

availability of this material at NARA, email fr.inspection@nara.gov, or go to:

<https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on June 27, 2022.

Christina Underwood, Acting Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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